

WHAT IS CLAIMED IS:

1. A semi-transparent reflective electro-optic apparatus, comprising:
  - an electro-optic material;
  - a light-transmitting substrate retaining the electro-optic material;
  - a light-transmitting concave and convex forming film defining specific concave portions and convex portions; and
  - a light-reflecting film formed over the concave and convex forming film, the light-reflecting film defining a light-transmitting window, a back surface of the light-reflecting film including, in a partial region of a periphery of the light-transmitting window, a light-guiding reflection surface that opposes a surface of the light-reflecting film in a region opposing the partial region with the light-transmitting window in between, so that part of light incident from a back surface side of the light-transmitting substrate is reflected on the light-guiding reflection surface and guided to a surface side of the light-transmitting substrate.
2. The semi-transparent reflective electro-optic apparatus according to Claim 1, the concave and convex forming film being composed of a lower layer light-transmitting film formed into a specific layout pattern, and an upper layer light-transmitting film formed on an upper layer side of the lower layer light-transmitting film.
3. The semi-transparent reflective electro-optic apparatus according to Claim 2, further including:
  - a frame-shaped protrusion, forming a frame-shaped convex portion along an outer rim of the light-transmitting window with respect to a surface of the concave and convex forming film, formed on a lower layer side of the light-reflecting film;
  - the light-guiding reflection surface being formed of a back surface of the light-reflecting film covering the frame-shaped convex portion from a foot portion to a top portion on a side opposite to a side where the light-transmitting window is formed; and
  - a surface of the light-reflecting film opposing the light-guiding reflection surface and forming a reflection surface to which light reflected on the light-guiding reflection surface is guided, by covering the frame-shaped convex portion with the light-reflecting film from a foot portion to a top portion on a side where the light-transmitting window is formed, at a portion opposing the light-guiding reflection surface with the light-transmitting window in between.
4. The semi-transparent reflective electro-optic apparatus according to Claim 3, the reflection surface for light reflected on the light-guiding reflection surface opposing the light-guiding reflection surface as a parallel or nearly parallel plane.

5. The semi-transparent reflective electro-optic apparatus according to Claim 3, the frame-shaped protrusion being composed of a light-transmitting film formed in a same layer as the lower layer light-transmitting film.

6. The semi-transparent reflective electro-optic apparatus according to Claim 5, the frame-shaped protrusion and the lower layer light-transmitting film being formed with rounded top surface portions.

7. The semi-transparent reflective electro-optic apparatus according to Claim 3, the light-reflecting film having a film thickness less than a height of the frame-shaped convex portion.

8. The semi-transparent reflective electro-optic apparatus according to Claim 1, the light-reflecting film being provided with more than one light-transmitting window.

9. The semi-transparent reflective electro-optic apparatus according to Claim 1, a planar shape of the light-transmitting window being a polygonal having a side parallel or nearly parallel to a side on which the light-guiding reflection surface is formed.

10. The semi-transparent reflective electro-optic apparatus according to Claim 1, the electro-optic material being liquid crystal.

11. An electronic equipment, comprising:  
the semi-transparent reflective electro-optic apparatus according to Claim 1  
usable as a display apparatus.